The Nakṣatra System in the Vedic Calendar

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1. [Here is a sequel to "The Vedic Calendar and the Rituals (1)" JIBS 58-3, 2010, 1117ff.]
In the Vedic calendar until about the 5th century B.C., the date is determined by the moon's phase and position relative to the stars on or near its path. Special importance is set on two nights: *amāvāsyā̀- rātrī́* (later *rātrí-*) 'the night in which the moon stays overnight (*vas*) at home (*amā́*),' i.e. 'the night of the moon's conjunction with the sun,' and *paurṇamāsī́- rātrī́* (*rātrí-*) 'the full moon night in which the moon is in opposition to the sun.' These are the sacred nights for *upavasathá-*'staying overnight near the sacrificial fire with religious observance' (hence, the Uposatha in the Buddhism/Jinism) and, the next morning, the New or Full moon sacrifice as well as other Śrauta rituals are performed (cf. ĀpŚS X 2,8, etc.).

It is, however, not easy to decide the Amāvāsyā or Paurṇamāsī night. The period between two successive conjunctions with the sun (i.e. lunation = synodic month) is on average about 29.53 solar days. The moon's conjunction and opposition may occur any time, in the night as well as in the daylight. In the latter case a vexed question arises whether the preceding or the following night is valid as the Amāvāsyā or Paurṇamāsī. It becomes all the more difficult as various factors change independently, i.e. time of sunset/-rise, time of moonrise/-set, angle between the horizon and the ecliptic, divergence of the moon's orbit from the ecliptic. The problem is more serious for the Amāvāsyā night, for the thin moon in the twilight just before and after the conjunction may easily escape from the naked eye, even not disturbed by the weather. This difficulty required to watch the moon every night with careful attention, which brought forth the knowledge on its movement with reference to the sun and the fixed stars: after the conjunction with the sun, the newly appeared moon moves from west to east in its orbit, approaching every night a different star or star-group, until it joins again with the sun. The nights in which the moon is visible number on average 28 in a synodic month. The moon was thus considered to visit every night a different star (-group) situated on its path during 28 nights and to stay at home with the sun in the Amāvāsyā night. The stars as well as the sun at which the moon stays are named *nákṣatra-* nt.

'place (suffix *-tra-/-atra-*)[1] to which [the moon] attains (*nákṣa-*[ti])'[2] (commonly translated "Mondstation," "Mondhaus" or "lunar mansion"). While the star in general is expressed by the word of Indo-European origin (**$h_2$stér-*), *stár-* (RV: *stṛ́bhiḥ, tárāḥ*), later *tā́rakā-* (AV+) and *tārā-* (Cl. Skt.), *nákṣatra-* means 'the heavenly bodies of special kind related to the moon,' originally inclusive of the sun as attested in the Ṛgveda [RV] (→ 2.), then 'the remarkable star(-group)s situated approximately equidistant on or near the moon's path.'[3] This notion itself must go back to very old times beyond Vedic age, maybe to those of the Indo-European common stage, as the Nebra Sky Disk in the European Bronze Age (completed ca. 1600 B.C.) suggests.[4]

As above mentioned, the moon visits 28 Nakṣatras (except the sun) in a synodic month, from which results the system of 28 Nakṣtras. This model accessible to the common people seems have been favored in popular ceremonies (→ 3., 6., 7.). On the other hand, the observer of celestial bodies recognized another cycle of the moon's movement related to the star, i.e. the sidereal month (on average ca. 27.32 solar days), which lead to the system of 27 Nakṣatras. This more scientific model have prevailed among the priest-scholars (→ 4., 5.). Each system has a defect: the 28 Nakṣatras based on the synodic month is disaccord with the moon's relation to the stars, while the 27 Nakṣatras based on the sidereal month diverges from the date of synodic month. Efforts to resolve this contradiction are revealed in the Yajurveda [YV] texts examined below. Leaving questions of the number aside, members of the Nakṣatras seem to have been not fixed in their early stage except for several important and characteristic star(-group)s such as Kṛ́ttikās. They seem to have been systematized as the popular worship of the Nakṣatras developped and to have been partly taken into the Śrauta rituals (→ 2.). *nákṣatra-* in pl. is sometimes used in generalized meaning as synonym for *stár-/tā́rakā-* (→ 2.).[5] For the heliacal rising, s. 6.

2. The RV, which has a strong tendency to avoid mentioning what concerns the night or darkness, does not inform us much of the stars. Beside *stár-* (7 times in pl.), *nákṣatra-* are attested 10 times: all the 6 forms in sg. (VI 67,6 masc.; VII 81,2; 86,1; X 88,13; 111,7; 156,4.) imply the sun (*sū́rya-*); of the 4 forms in pl. (I 50,2; III 54,19; X 68,11; 85,2), the sense 'lunar mansion' is evident in X 85,2 of the Sūkta on the Moon's marriage with Sūryā, in which two Nakṣatra names are mentioned: X 85,13 *aghā́-* 'evil' f.pl. and *árjunī-* 'silver colored' f.du. (~ AV XIX 1,13 *maghā́-* and *phalgunī-*; → 3.), s. Ved.Cal. (1) 3.2. Two vocatives *punarvasu* and *revatīḥ* in X 19,1 have nothing to do with the Nakṣatra; the former is an epithet of Agni and Soma, the latter of the cows. *tiṣyà-* m.sg. in V 54,13 and X 64,8 is consid-

ered as a different star from the 6th Nakṣatra *tiṣyà-/tíṣya-*.[6] The enigma hymn I 164,16 implies *kŕ̥ttikā-* f.pl. 'spinner women,' but not as a Nakṣatra.[7]

It is striking that the Nakṣatras are enumerated only in supplementary parts of the Atharvaveda [AV] and the Black YV (mantra- and prose-portion). They all begin with Kr̥ttikās (identified as Pleiades situated at the spring equinox about 2300 B.C.) and show a remarkable affinity to each other with regard to members, their order and divinities; they are divided into two groups: 28 Nakṣatras with Abhijít and 27 without it, s. Synopsis at the end.[8] Though Abhijít is identified as Vega (Lyra α) by the classical astronomy, it is yet an open question which star the Vedic Abhijít is, for different stars are called by the same name as *tiṣyà-* and *rohiṅ́-*. Vega (ecliptic latitude + 61° 44′ in A.D. 2010) is too remote from the moon's orbit to be a Nakṣatra. Cf. Abhijít TB^{P} I 5,2,3 (→ 7.), *abhijáyat* and *abhíjitam* TB^{P} I 5,1,4 (→ 6.). It is also the name of a Soma sacrifice performed in the 6th month of the Gavāmayana.

3. A list of 28[9] Nakṣatras appears in AV XIX 7 in the Śaunaka recension. This hymn for daily worship of Nakṣatras (→ 7.) belongs to the latest stratum of the AV.

1. *citrā́ṇi sākáṃ divi rocanā́ni | sarīsr̥pā́ṇi bhúvane javā́ni | turmíṣaṃ* (Ed. Vishva Bandhu with v.l. *turmícham*, Whitney emends to *aṣṭāviṃśáṃ* according to XIX 8,2 → n.9) *sumatím icchámāno | áhāni gīrbhíḥ saparyāmi nā́kam* || 2. *suhávaṃ me **kŕ̥ttikā róhiṇī** cā́- | ,stu bhadráṃ **mr̥gáśiraḥ** śám **ārdrā́** | **púnarvasū** sūnŕ̥tā cā́ru **púṣyo*** (Ed. W *puṣyò*) | *bhānúr **āśleṣā́** áyanaṃ **maghā́** me* || 3. *púṇyaṃ **pū́rvā phálgunyau** cā́tra **hástaś** | **citrā́** śivā́ **svātíḥ** sukhó me astu | rā́dho **viśā́khe** suhávā-**núrādhā́** | **jyéṣṭhā** sunákṣatram áriṣṭaṃ **mū́lam*** || 4. *ánnaṃ **pū́rvā** rāsantāṃ me **aṣāḍhā́** | ū́rjaṃ devy úttarā* (Ed. W *yé hy úttara*) *ā́ vahantu | **abhijín** me rāsatāṃ púṇyam evá | **śrávaṇaḥ śráviṣṭhāḥ** kurvatāṃ supuṣṭím* || 5. *ā́ me mahác **chatábhiṣag** várīya | ā́ me **dvayā́ próṣṭhapadā** suśárma | ā́ **revátī cāśvayújau** bhágaṃ ma | ā́ me rayíṃ **bháraṇya** ā́ vahantu* ||

1. To [the Nakṣatras which are] conspicuous, shining altogether in heaven, swift and repeating to creep in the universe, desiring protection (? *turmíṣaṃ*; s. above text and n.9) and favor, I pay homage day by day to the celestial vault (*nā́ka-*) with songs of welcome. 2. Kr̥ttikās 'spinner women' (No.1: f.pl.) and Róhiṇī 'reddy (cow)' (No.2: f.sg.) be for me easy to call, Mr̥gaśiras 'head of a beast (esp. antelope)' (No.3: n.sg.) be lucky, Ārdrā́ 'moist woman' (No.4: f.sg.) be auspicious, Púnarvasū 'two men who have again wealth' (No.5: m.du. → 2.) be virile (*sūnŕ̥ta-*), Púṣya 'one who is to blossom' (No.6: m.sg.) be lovely, Āśleṣā́s 'clinging women' (No.7: f.pl.) be radiance, Maghā́s 'well-doing ones' (No.8: m./f.pl.; RV *aghā́-* → 2.) be my way! 3. The former [and latter] Phálgunyau 'two pale men' (No.9–10: m.du.; RV *árjunī-* → 2.) and Hásta 'hand' (No.11: m.sg.) be prosperous here, Citrā́ 'conspicuous woman' (No.12: f.sg.) be friendly, Svātí 'one who has good ducks' (No.13: m./f.sg.; *níṣṭya-* 'outside one' in other lists) be comfortable for me! Viśā́khe 'two-forked couple' (No. 14: n./f.du.) be success! Anurādhā́ 'woman causing welfare' (No.15: f.sg.) be easy to call! Jyéṣṭhā 'the eldest woman (the principal wife)' (No.16: f.sg.) be possessed of a good

Nakṣatra, Mū́la 'root' (No.17: n.sg.) be not to be hurt! 4. Let the former Aṣāḍhā́s 'unconquerable women' (No.18: f.pl.; cf. AiGr I 224f.) bestow food upon me, let the latter [Aṣāḍhās] (No.19: f.pl.), oh goddess (sg.), bring [me] nourishment! Abhijít 'victorious one' (No.20: m./f.sg.) bestow the very merit upon me! Let Śrávaṇa 'ear' (No.21: m.sg.) and Śraviṣṭhās 'the most famous women' (No.22: f. pl.) produce great prosperity! 5. Let Śatabhiṣaj 'healer of hundred (persons)' (No.23:m./f.sg.) [bring] me great liberty, let two twofold Próṣṭhapadā 'two twofold feet of a camping bed' (No.24–25:m.f.du.) (4 feet in total) [bring] me good shelter, let Revátī 'wealthy (woman)' (No.26: f.sg. → 2.) and Aśvayujau 'two persons who yoke horses' (No.27: m./f.du.) [bring] me a good share, let Bháraṇyas 'bringing women' (No.28: f.pl.) bring me wealth!

4. The 27–29 Nakṣatras are enumerated with their divinities in the mantras for the bricks symbolizing each a Nakṣatra (*nakṣatreṣṭakā-*) piled on the 5th layer of the fire-alter for the Agnicayana (Agniciti): in the Maitrāyaṇī Saṁhitā [MS], Kāṭhaka-Saṁhitā [KS] and Taittirīya-Saṁhitā [TS] of the Black YV, but neither in the Kapiṣṭhala-Kaṭha-Saṁhitā, nor the White YV. Cf. the mantras in the Taittirīya-Brāhmaṇa [TB] I 5,1 (→ 5.). For each brick, a Nakṣatra, a divinity and a common formula to all the bricks are uttered.

KS^{m} XXXIX 13:130,14–131,10 shows the most simple form with 27 Nakṣatras:

*agnír devátā. kŕ̥ttikā nákṣatram. prajā́patir devátā. rohiṇī́ nákṣatram. ... yamó devátā. „pabhāraṇīr nákṣatraṁ. 'agné rúcaḥ stha. prajā́pates sómasya dhātúr. **bhūyā́saṃ prájanayiṣīya.** téna bráhmaṇā téna cchándasā táyā devátayā-. „ṅgirasvád **dhruvā́s sīdata.**'*

The divinity [of this brick] is Agni, the Nakṣatra is Kŕ̥ttikās. The divinity is Prajāpati, the Nakṣatra is Rohiṇī́. ... The divinity is Yama, the Nakṣatra is Apabháraṇīs. 'You (the Nakṣatra bricks) are radiances of Agni, of Prājāpati, Soma, [and] Dhātr̥. **May I have more descendants!** With this formula with realizing power (*bráhman-*), with this metre, with this divinity, **sit (pl.) steadily like Aṅgiras.**' (The mantras in quotation marks are repeated for each brick.)

MS^{m} II 13,20:165,12–166,12 mentions 29 Nakṣatras corresponding to a synodic month:

*kŕ̥ttikā nákṣatram. agnír devátā-. „gné rúcaḥ stha prajā́pateḥ sómasya dhātúr. **r̥cé tvā. rucé tvā. bhāsé tvā. jyótiṣe tvā.** téna cchandasā téna bráhmaṇā táyā devátayāṅgirasvád **dhruvā́ sīda.** rohiṇī́ nákṣatram. prajā́patir devátā. ... **abhijín nákṣatram. brahmā́ devátā.** ... bháraṇīr nákṣatraṁ. yamó devátā. **brāhamaṇó nákṣatraṁ. sómo devátā-. „gné rúcaḥ stha ... dhruvā́ sīda.***

The Nakṣatra [of this brick] is Kŕ̥ttikās, the divinity is Agni. 'You (pl. the Nakṣatra bricks) are radiances of Agni, of Prājāpati, Soma [and] Dhātr̥. **For the hymn, [I place] you (sg. a Nakṣatra brick). For the radiance, [I place] you. For the brightness, [I place] you. For the light, [I place] you.** With this metre, with this formula with realizing power, with this divinity, **sit (sg.) steadily like Aṅgiras.**' The Nakṣatra is Rohiṇī́, the divinity is Prajāpati. ... The Nakṣatra is **Abhijít**, the divinity is **Brahmán** ... The Nákṣatra is Bháraṇīs, the divinity is Yama. The Nakṣatra is **Brahmin** (*brāhamaṇá-*), the divinity is **Soma.** 'You are radiances ... sit steadly like Aṅgiras.'

28 Nakṣatras are similar with those in the AV. The 29th N° is not a heavenly body but the

Brahmin on earth, which implies that the moon in the Amāvāsyā night stay with the sun in the sacrificial fire by the Brahmin for the Upavasatha and the New moon sacrifice (→ 1.). Cf. the common concept that the sun stays overnight in the fire (RV X 88,6; TB^{p} II 1,2,9; ŚB II 3,1,3, etc.). The Brahmin as a Nakṣatra appears also TB^{p} I 5,3,4 (→ 6., Synopsis). The divinity for Abhijít is God Brahmán (masc.), personified from the nt. *bráhman-*. This suggests relative late origin of this passage (cf. Weber Naxatra II 379). God Bráhman is attested also in MS^{m} II 9,1 [Agniciti] which, however, seems an interpolation from younger texts.

TS^{m} IV 4,10,1–3 enumerates 27 Nakṣatras but adds two mantras (in pratīka) for Paurṇamāsī and Amāvāsyā taken from the New and Full moon sacrifices (TS^{m} III 5,1ab ~ AV VII 79,1; 80,1; MānŚS VI 2,3,8) in order to adjust the Nakṣatra number to a synodic month. Both the 2nd and 16th Nakṣatras are called Rohiṇī; Indra appears 3 times as divinity (Citrā, the 16th Rohiṇí, Śatabhiṣaj). The common formulas to all the bricks lack the last important part. All these indicate to the secondary modification made by the Taittirīyas:

kṛ́ttikā nákṣatram. agnír devátā-. „gné rúca stha. prajā́pater dhātúḥ sómasya. 'rcé tvā ***dyuté tvā.*** *bhāsé tvā. jyótiṣe tvā.* ***rohiṇī́*** *nákṣatram. prajā́patir devátā. ...* ***rohiṇī́*** *nákṣatram. índro devátā. ...* ***apabhárāṇīr*** *nákṣatraṃ. yamó devátā.* ***pūrṇā́ paścā́d. yát te devā́ ádadhuḥ.***

The Nakṣatra [of this brick] is Kṛttikās, the divinity is Agni. 'You (pl. the Nakṣatra bricks) are radiances of Agni, of Prājāpati, Soma [and] Dhātṛ. For the hymn (*ṛc-*), [I place] you (sg. a N° brick). For the lightning, [I place] you (sg.). For the brightness, [I place] you (sg.). For the light, [I place] you (sg.).' The Nakṣatra is **Rohiṇī́**, the divinity is Prajāpati. ... The N° is **Rohiṇī́**, the divinity is Indra. ... The N° is Apabhāraṇīs, the divinity is Yama. **'Full in behind (west) ...' (mantra for Paurṇamāsī). 'When the gods fixed you [a share] ...' (mantra for Amāvāsyā).**

How to pile the bricks is prescribed in the Śrauta-Sūtras, which deviates much or less from the Mantras: [Mānava-ŚS VI 2,3,8 (Maitrāyaṇīya school)] 13 Nakṣatra bricks + 1 Paurṇamāsī brick + 15 Nakṣatra bricks beginning **Viśākhe** + 1 Amāvāsyā brick = 30 bricks; [Baudhāyana-ŚS X 46 and Āpastamba-ŚS XVII 6,5–10 (Taittirīya school)] the 1st Paurṇamāsī brick + 14 Nakṣatra bricks till **Viśākhe** + 1 Amāvāsyā brick + 13 Nakṣatra bricks + the 2nd Paurṇamāsī brick = 30 bricks. The 30 bricks symbolize the ideal month of 30 nights (→ Ved.Cal. (1) 3.1.). MŚS omits the 29th Nakṣatra in the MS and cites the hymns for Paurṇamāsī and Amāvāsyā under the influence of the Taittirīyas. In the BŚS and ĀpŚS, a month begins with the full moon night as in later calendar and two Paurṇamāsī bricks are used. In actual performance of the Agnicayana, 30 pebbles (*śarkara-*) instead of bricks are put on the surface of the 5th layer, since the ŚS prescribes much more than the necessary bricks for the construction of the fire altar (cf. Staal, Agni I 493–495). The man-

tras for the Nakṣatra bricks are thus considered as a secondly interpolation taken from the formulas for some secular cult of the Nakṣatras such as to be found in TB^{m} I 5,1 (→ 5.).

5. TB^{m} I 5,1 contains 27 Nakṣatras with their divinities as well as the mantra-pratīkas for Paurṇamāsī and Amāvāsyā like TS^{m} IV 4,10, but lacks the formula common to all the Nakṣatra bricks. This mantra-collection describes what is yonder (or after) and underneath (or before) each Nakṣatra, which concerns popular ceremonies rather than Śrauta rituals. Though long discussed, whether this text belongs to the Agnicayana (→ 4.) or the Nakṣatra-iṣṭis TB III 1 (→ 7.) (cf. Weber nakxtra II 304f.; Keith TS lxxvi, lxxxii), it is considered to be independent from both the rituals and to serve for another kind of Nakṣatra worship.

agnéḥ kṛ́ttikāḥ | śukrám ***parástāj*** *jyótir* ***avástāt*** *| ... pitṛ́ṇā́m* ***maghā́ḥ*** *| rudántaḥ parástād apabhraṁ śò 'vástāt | aryamṇáḥ pū́rve* ***phálgunī*** *| jāyā́ parástād ṛ́ṣabhò 'vástāt |* ***bhágasyóttare*** *| vahatávaḥ parástād váhamānā avástāt || ... víśveṣāṃ devā́nām úttarāḥ |* ***abhíjayat parástād abhíjitam avástāt*** *| ... pū́rṇā́ paścā́d yát te devā́ ádadhuḥ ||* Kṛttikās belong to Agni. The white-bright one [is] yonder (or: after), the light [is] underneath (or: before). ... Maghās belong to the Fathers. The crying people (in the funeral) [are] yonder, falling down (of the dead) [is] underneath. Two former Phálgunī belong to Aryaman. The wife is yonder, an ox (for the wedding feast) is underneath. Two latter [Phálgunīs] belong to Bhaga. The goods as dowry [are] yonder, those who bring [the bride] [are] underneath. ... Two latter [Aṣāḍhās] belong to the All-gods. What is conquering (nt. ***abhijáyat***) [is] yonder, the conquered (***abhíjitam***) [is] underneath. ... 'Full in behind (west) ...' 'When the gods fixed you [a share] ...' (For the Phálgunī and the marriage, cf. RV X 85,13 [→ 1.; Ved.Cal. (1) 3.2.], Kauśika-Sūtra 75,5; Āpastamba-Gṛhyasūtra I 3,1ff.)

6. TB^{p} I 5,2 and I 5,3 have no relation to the preceding TB^{m} I 5,1 but give various explanations of the Nakṣatras which seem to have developed outside the Śrauta rituals: observation of heliacal rising of a Nakṣatra probably for the Amāvāsyā night and the following daytime (→ Ved.Cal. (1) 2.), Prajāpati composed of Nakṣatras, characteristics of each Nakṣatra inclusive of Abhijít, theological etymology of *tā́rakā-* and *nákṣatra-* (→ n. 2), division of the Deva-Nakṣatras (Kṛttikās ~ Viśākhe) and the Yama-N° (Anurādhās ~ Apabharaṇīs), auspicious days and day-parts, Brahmin as the 28th Nakṣatra (→ 4., Synopsis), etc.

I 5,2,1ff. ***yát púṇyam nákṣatram | tád bát kurvītopavyuṣám*** *| yadā́ vái sū́rya udéti | átha nákṣatram naiti | yā́vati tátra sū́ryo gácchet | yátra jaghanyàm paśyet | tā́vati kurvīta yatkā́rī syāt |* ***púṇyāha*** *evá kurute | evám ha vái yajñéṣuṃ ca śatádyumnaṃ ca mātsyó niravasāyayā́ṃ cakāra ||1|| ...* ***abhijín*** *nā́ma nákṣatram | upáriṣṭād aṣāḍhā́nām | avástāc chroṇā́yai | devāsurā́ḥ sámyattā āsan | té devā́s tásmin nákṣatre 'bhyàjayan ||3|| ...* What is an auspicious Nakṣatra, one should confirm (*bát* 'truly/really!' + *kurute*; cf. K. Hofmann Aufs. 355) that when the dawn is approaching (just before the sunrise). As soon as the sun rises, [one's sight] does not go to the Nakṣatra. If there is one who

does that (astronomical observation) as his task (*yatkārí*), one should do [one's task], as long as the sun would go where the last [star] would be seen. [It followes that] one does [one's task] on the very auspicious day. In this way, verily, Mātsya made Yajñeṣu and Śatadyumna to start from the settlement [for migration] (*niravasāyayāṃ cakāra*; cf. Rau Staat 14). ... The Nakṣatra **Abhijít** by name [is] above (or: after) Aṣāḍhās, and below (or: before) Śroṇā. The Devas and the Asuras were confronted. The Devas conquered at this Nakṣatra. ...

7. TB III 1,1–3 (mantra) and 4–6 (prose) treat the Nakṣatra-iṣṭis, i.e. the daily offerings to the 28 Nakṣatras and the moon, sun, etc. during a month. According to the BaudhŚS XXVIII 3–4, this ritual begins at the Amāvāsyā night before the full moon situated at the 14th N° Viśākhā (Libra α β) which occurs around the spring equinox about 900 B.C. Here is a month long festival centering on the full moon at the spring equinox, cf "Passover".

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1) Cf. AiGr II-2 701ff., 170f. 2) The etymology of *nákṣatra-* was variously explained: from *nakṣ* 'attain (to heaven)' TB^p I 5,2,5, Nirukta 3,20, Grassmann; **ná-kṣatra-* Pāṇini VI 3,75 (comp. with negative *ná*; schol. from *kṣar* 'flow' or *kṣi* 'perish,' i.e. "imperishable"), 'having no governing power' ŚB II 1,2,18f. (cf. Nirukta 3,20); **nakt-tra-* "die Nacht schützend" Aufrecht, Weber; **nákt-kṣatra-* "Herrschaft über die Nacht habend" Brugmann, AiGr III 233, etc. 3) In the Jyotiṣa, the notion of the *nákṣatra-* was transformed into the equally spaced 27 zones of the ecliptic. 4) The 32 stars inclusive of the Pleiades beside the crescent and the full moon are recognized by H. Meller Die Himmelsscheibe von Nebra, Der Geschmidete Himmel 22–31, spec. 28f.; Schmidt-Kaler Acta praehitorica et archaeologica 40, 2008, 17f. The Babylonian list of 17 (or 18) constellations that the moon touches (MUL.APIN's list VI, Hunger and Pingree MUL. APIN, Archiv für Orientforschung, Bh. 24, 67–71, 144) is dated much later than the other main lists of MUL.APIN and is supposed to have originated under the influence of the Indian Nakṣatras. For the converse view, cf. Pingree MUL.APIN and Vedic Astronomy, Fs. Sjoberg, 440, 444f. and Hunger and Pingree, Astral Science in Mesopotamia, 31, 72f. Cf. further Chinese "xiu (sieou)" (28 unequal divisions of the celestial sphere based on stars near the equator) and Arabian 28 lunar mansions. 5) From the elliptic pl. 'stars represented by the Nakṣatras'; for opposite views, cf. Weber Naxatra II 267ff., Grassman Wb. RV s.v., Thibeau Astronomy 12f., etc. 6) RV *tiśyà-* corresponds to jav. *tištriia-* (m.) name of the star Sirius as divinity, s. Forssman KZ 82, 1968, 57ff. 7) Cf. Thieme Fs. Schneider 329–336 = Kl.Schr. 956–963. 8) The view that the 27 Nakṣatra system is original to which Abhijít is added is widely shared, cf. Weber Naxatra II 274–280. 9) The number 28 of the Nakṣatras is mentioned in the following hymn XIX 8,2 (only Śaunaka): *aṣṭāviṃśáni śivā́ni śagmā́ni sahá yógaṃ bhajantu me* 'Let the friendly and helpful [Nakṣatras] composed of 28 share together in my migration (→ 6.) !'

〈Key words〉 astronomy, calendar, Veda, *nákṣatra*, *amāvāsyà*, *paurṇamāsí*, Agnicayana

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Synopsis of the Nakṣatras (Nakṣatra-names are cited in nom. form; the divinities are not mentioned in the AV and the TB^{p} I 5,2)

	AV-Ś XIX 7,1–5	MS^{m} II 13,20	KS^{m} XXXIX 13	TS^{m} IV 4,10	TB^{m} I5,1	TB^{m}III1–6	TB^{p} I 5,2
Number	28	29	27	27	27 (28)	28	28 (?)
1. f.pl.	*kṛ́ttikās*	*kṛ́ttikās* (*agní-*)	id.	id.	id.	id.	*kṛ́ttikās*
2. f.sg.	*róhiṇī*	*rohiṇī́* (*prajā́pati-*)	id.	id.	id.	id.	—
3. n.sg.	***mṛgáśiras***	***invagā́*** (*marút-* pl.)	***invakā́*** (*marút-* pl.)	***mṛgaśīrṣaṃ*** (***soma-***)	***invakā́*** (***soma-***)	***mṛgaśīrṣaṃ*** (***soma-***)	—
4. f.sg.	***ārdrā́***	***bāhús m.sg.*** (*rudrá-*)	= MS	***ārdrā́***	***bāhū́* du.**	***ārdrā́***	—
5. n.du.	*púnarvásū*	*púnarvasur* **sg.** (*áditi-*)	= MS	*púnarvasū* **du.**	= TS	= TS	—
6. m.sg.	***púṣyas***	***tíṣyas*** (*bṛ́haspáti-*)	= MS	***tiṣyàs***	= TS	= TS	—
7. f.pl.	*āśleṣā́s*	*āśleṣā́s* (*sarpá-* pl.)	= MS	***āśreṣā́s***	= TS	= TS	—
8. f.pl.	*maghā́s*	*maghā́s* (*pitṛ́-* pl.)	id.	id.	id.	id.	—
9. **m.du.**	***pū́rvā phálgunyau***	***phálgunīs* f.pl.** (***bhága-***)	= MS	***phálgunī* f.du.** (***aryamán-***)	= TS	***phálgunīs* pl.** (***aryamán***)	—
10.	(not mentioned)	***phálgunīs* f.pl.** (***aryamán-***)	***uttarāḥ phálgunīs*** (***aryamán-***)	***phálgunī* f.du.** (***bhága-***)	***uttare* du.** (***bhága-***)	***phálgunīs* pl.** (***bhága-***)	—
11. m.sg.	*hástas*	*hástas* (*savitṛ́-*)	***hástau* du.**	*hástas*	= TS	= TS	*hástas*
12. f.sg.	*citrā́*	*citrā́* (***tváṣṭṛ-***)	id.	id. (***índra-***)	id. (***índra-***)	id. (***tváṣṭṛ-***)	*citrā́*
13. m./f.sg.	***svātís***	***níṣṭyaṃ* n.** (*vāyú-*)	***niṣṭyaṃ*** n.	***svātī́* f.**	***niṣṭyā* f.**	***niṣṭyā***	***niṣṭyā***
14. n./f.du.	***viśā́khe***	***víśākhaṃ* n.sg.** (*indrāgnī́* du.)	= MS	***víśākhe* du.**	= TS	= TS	***víśākhe***

[KS *viśākhā* f.sg. in Keith/Macdonell Vedic Index I s.v. Nakṣatra]

[TB^{p} I 5,2,6–9: The Deva-Nakṣatras = ***kṛ́ttikās*** ~ ***víśākhe***; The Yama-Nakṣatras = ***anūrādhā́s*** ~ ***apabháraṇīs***]

15. f.pl.	***anurādhā́s***[1]	*anūrādhā́s* (*mitrá-*)	id.	id.	id.	id.	*anūrādhā́s*
16. f.sg.	*jyéṣṭhā*	*jyeṣṭhā́* (***váruṇa-***)	*jyeṣṭhā́* (***índra-***)	***rohiní*** (***índra-***)	***rohiní*** (***índra-***)	= KS	***jyeṣṭhaghní***
17. n.sg.	***mū́lam***	***mū́lam*** (*nírṛti-*)	= MS	***vicṛ́tau* f.du.** (***pitṛ́-pl.***)	***mūlavárhaṇī* f.sg.** (*nirṛti-*)	= MS/KS	***mūlavárhaṇī***
18. f.pl.	*pū́rvās* ***aṣāḍhā́s***	***āṣāḍhā́s*** (*áp-* f.pl.)	***āṣāḍhā́s***	***aṣāḍhā́s***	*pū́rvā* ***aṣāḍhā́s***	***aṣāḍhā́s***	***āṣāḍhā́s***
19. f.pl.	*úttarās* (*aṣāḍhā́s*)	*āṣāḍhā́s* (*víśve devā́ḥ* pl.)	***úttarā āṣāḍhā́s***	***aṣāḍhā́s***	***úttarās***	***aṣāḍhā́s***	
20. sg.	***abhijít***	***abhijít*** (***brahmán-***)	—	—	—	***abhijít***	***abhijít***
21. m.sg.	***śrávaṇas***	***śroṇā́* f.** (*víṣṇu-*)	***aśvatthás* m.** (*víṣṇu-*)	***śroṇā́***	***śroṇā́***	***śroṇā́***	***śroṇā́***
22. f.pl.	*śráviṣṭhās*	*śráviṣṭhās* (*vásu-*pl.)	id.	id.	id.	id.	*śráviṣṭhās*
23. sg.	*śatábhiṣaj*	*śatábhiṣaj* (***índra-***)	*śatábhiṣaj* (***váruṇa-***)	*śatábhiṣaj* (***índra-***)	= TS	= KS	*śatábhiṣaj*
24./25.m.du.	***dvayā́ próṣṭhapadā***	***proṣṭhapadā́s* pl.** (***áhi- budhnyà-***)	***proṣṭhapadā́s*** (*ajá- ékapad-*)	***proṣṭhapadā́s*** (*ajá- ékapad-*)	***pū́rve proṣṭhapadā́s*** (*ajá- ékapad-*)	***proṣṭhapadā́s*** (*ajá- ékapad-*)	***próṣṭhapada-* pl.**
		proṣṭhapadā́s (***ajá- ékapad-***)	***úttare puroṣṭhapadā́s*** (*áhi- budhnyà-*)	***proṣṭhapadā́s*** (*áhi- budhníya-*)	***úttare*** (*áhi- budhníya-*)	***proṣṭhapadā́*** (*áhi- budhníya-*)	
26. f.sg.	*revátī*	*revátī* (*pūṣán-*)	id.	id.	id.	id.	*revátī*
27. du.	*aśvayújau*	*aśvayújau* (*aśvín-* du.)	id.	id.	id.	id.	*aśvayúj-* du.
28. f.pl.	***bháraṇyas***	***bháraṇīs*** (*yamá-*)	***apabháraṇīs***	***apabháraṇīs***	***apabháraṇīs***	***bháraṇīs***	***apabháraṇīs***
29.	—	***brāhmaṇás*** (*soma-*)	—	—	—	—	—

[TB[p] I 5,3,4 *brāhmaṇó vā́ aṣṭā́viṁśo nákṣatrāṇām* 'The Brahmin is, verily, the 28[th] Nakṣatra,' cf. MS[m] II 13,20 (the Brahmin is the 29[th] Nakṣatra)]